1. **Find an example in your life where a value stream map might be helpful. You cannot use the same example as is depicted in the article. The time span is up to you; a day? a week? a month? a year? Longer?**
2. **Create a graphic version of the VSM for your example.**
3. **Continue the process by analyzing lean metrics, and optimizing the processes.**
4. **You may use any app as long as you can save the result in an Office format, or as a graphic file.**

**Assignment: Value Stream Mapping (VSM) – Grocery Shopping Example**

**Step 1: Understand Value Stream Mapping (VSM)**

Value Stream Mapping identifies inefficiencies in a process and offers solutions for improvement. In this case, we’ll map the grocery shopping process to optimize time, resources, and effort.

**Step 2: Choose the Process and Timeline**

**Process: Weekly grocery shopping**

**Timeframe: A typical shopping trip from planning to storing groceries at home.**

**Step 3: Create the VSM**

**Current State Map**

Each step in the process is analyzed for time taken, wait time, and inefficiencies.

| **Step** | **Action** | **Time (mins)** | **Wait Time (mins)** | **Issues** |
| --- | --- | --- | --- | --- |
| **1**: Plan shopping list | Check stock and write a list | 20 | 0 | Forgetting items, duplicate items |
| **2**: Drive to the store | Travel to the nearest supermarket | 15 | 0 | Traffic delays |
| **3**: Navigate the store | Find items on the list | 45 | 10 | Unfamiliar with store layout |
| **4**: Wait in checkout line | Pay for items | 10 | 5 | Long lines during peak hours |
| **5**: Drive back home | Travel from the store | 15 | 0 | Traffic delays |
| **6**: Store groceries | Organize items in the kitchen | 15 | 0 | Inefficient storage, misplaced items |

**Total Current Cycle Time:**

* **Process Time**: 120 minutes
* **Wait Time**: 15 minutes
* **Cycle Time**: 135 minutes

**Future State Map**

Optimize each step to reduce inefficiencies and total time.

| **Step** | **Improvement** | **Time (mins)** | **Wait Time (mins)** | **Expected Benefit** |
| --- | --- | --- | --- | --- |
| **1**: Plan shopping list | Use an app to manage and organize the list | 10 | 0 | Avoid forgetting or duplicating items |
| **2**: Drive to the store | Choose non-peak hours to avoid traffic | 10 | 0 | Reduce travel time |
| **3**: Navigate the store | Group items by store sections in the list | 30 | 5 | Quicker navigation and fewer backtracks |
| **4**: Wait in checkout line | Use self-checkout or scan-and-go options | 5 | 2 | Faster checkout |
| **5**: Drive back home | Choose optimized routes with less traffic | 10 | 0 | Reduce delays |
| **6**: Store groceries | Use labeled bins for specific items | 10 | 0 | Efficient storage and faster access |

**Total Future Cycle Time:**

* **Process Time**: 75 minutes
* **Wait Time**: 7 minutes
* **Cycle Time**: 82 minutes

**Step 4: Visualize the VSM**

**VSM Diagram Components:**

* **Current State Map**: Visualize each step with bottlenecks and inefficiencies highlighted.
* **Future State Map**: Show the improved workflow with lean optimizations.

Use tools like:

* **Microsoft PowerPoint/Word**: For simple shapes and arrows.
* **Lucidchart/Visio**: For professional mapping.
* **Canva/Figma**: For visually appealing designs.

**Step 5: Analyze Lean Metrics**

**Lean Metrics:**

1. **Process Time Reduction**: 120 mins → 75 mins (37.5% reduction).
2. **Wait Time Reduction**: 15 mins → 7 mins (53.3% reduction).
3. **Overall Cycle Time**: 135 mins → 82 mins (39.3% improvement).

**Key Improvements:**

* Eliminated repetitive list-making errors.
* Reduced navigation time using grouped item lists.
* Optimized checkout with self-checkout options.

**Step 6: Optimize and Implement**

* Use **grocery apps** (e.g., AnyList or Google Keep) for smart list management.
* Visit stores during **off-peak hours** for shorter queues and faster shopping.
* Group items in the shopping list by **store sections** to avoid unnecessary backtracking.
* Use **self-checkout options** to minimize wait time.

**Step 7: Save and Submit**

* **Graphic File**: Save your VSM as a .png or .jpg.
* **Office Format**: Save your VSM as a .pptx or .docx.

Let me know if you’d like help creating the graphic or refining the analysis further!